

U.S.N

--	--	--	--	--	--	--	--	--	--

P.E.S. College of Engineering, Mandya - 571 401
 (An Autonomous Institution affiliated to VTU, Belgaum)
Seventh Semester, B.E. - Industrial and Production Engineering
Semester End Examination; Dec. - 2015
Product Design and Manufacturing

Time: 3 hrs

Max. Marks: 100

Note: Answer any **FIVE** full questions, selecting at least **TWO** full questions from each **part**.

PART - A

- 1 a. Explain briefly the morphology of design. 10
 b. Explain the essential factors of product design. 10
- 2 a. Explain the following strategy :
 (i) Pricing strategy 10
 (ii) Product Quality strategy
 (iii) Product utility strategy.
- b. Briefly explain the models designed by industrial engineer. 10
- 3 a. Explain the criticisms and objectives of design. 10
 b. Explain briefly the principal stress Trajectories. 10
- 4 a. Explain design recommendations for technical Ceramic parts. 10
 b. Explain the design factors for Rubber parts. 10

PART - B

- 5 a. Explain the Siddal's classification of design approach. 10
 b. Describe the following :
 (i) Geometric programming 10
 (ii) Johnson's method of optimum design.
- 6 a. Explain briefly the profit and competitiveness. 10
 b. Explain the following :
 (i) Design for reliability 10
 (ii) Functional requirements.
- 7 a. With a neat sketch explain design of displays. 10
 b. Explain the following :
 (i) Man/Machine information exchange 10
 (ii) Design of controls.
- 8 a. What is value? Explain value analysis job plan. 10
 b. Explain material and process selection in value engineering. 10